Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-22 (Cancelled)

Claim 23 (Previously presented): An imaging system for a vehicle, the imaging system comprising:

an illuminator for illuminating a predefined field located outside of the vehicle and adjacent an entryway to an interior of the vehicle;

a detector for detecting radiation reflected from a person located in the predefined field, the detector being responsive to the detected radiation for providing image signals; and

a processor that is responsive to the image signals from the detector, the processor including face recognition software for analyzing the image signals for facial features of the person located in the predefined field, the processor comparing facial features of the person to known facial features of authorized vehicle occupants to determine whether the person is an authorized vehicle occupant, the processor causing the entryway to automatically become unlocked in response to a determination that the person is an authorized vehicle occupant.

Claim 24 (Previously presented): The imaging system of claim 23 wherein the illuminator is an infrared source and wherein the detector is an infrared detector for receiving reflected infrared radiation.

Claim 25 (Previously presented): The imaging system of claim 24 further comprising an infrared filter positioned between the detector and the predefined field.

Claim 26 (Previously presented): The imaging system of claim 24 wherein the infrared source includes a cluster of infrared light emitting diodes.

Claim 27 (Previously presented): The imaging system of claim 23 wherein the known facial features of the authorized vehicle occupants are facial images of the authorized occupants that are stored in a memory associated with the processor.

Claim 28 (Previously presented): The imaging system of claim 23 wherein the illuminator is pulsed on and off, the detector obtaining a first image when the illuminator is on and obtaining a second image when the illuminator is off, the processor determining a difference between the first and second images to mitigate effects of ambient light.

Claim 29 (Currently amended): The imaging system of claim 23 wherein the illuminator is also adapted to illuminate a predefined interior vehicle field and the detector is adapted to ~~detecting~~ detect radiation reflected from an occupant of the vehicle that is located in the predefined vehicle interior field and to providing occupant image signals, the processor comparing facial features of the occupant image signals to the known facial features of authorized vehicle occupants and causing a vehicle operation to be performed in response to a facial feature match.

Claim 30 (Previously presented): The imaging system of claim 29 wherein the system monitors gestures of the occupant and performs vehicle functions in response to detected gestures.

Claim 31 (Previously presented): The imaging system of claim 29 wherein the vehicle is started in response to the facial feature match between the occupant image signals and the known facial features.

Claim 32 (Previously presented): The imaging system of claim 29 wherein the processor, in response to a facial feature match, identifies the occupant and limits operation of the vehicle to a maximum driving speed associated with the identified occupant.

Claim 33 (Previously presented): The imaging system of claim 29 further including an intrusion alarm, the processor actuating the intrusion alarm in response to determining that the facial features of the occupant image signals do not match the known facial features of authorized vehicle occupants.

Claim 34 (Previously presented): The imaging system of claim 33 wherein the processor records an image of the occupant in a memory in response to determining that the facial features of the occupant image signals do not match the known facial features of authorized vehicle occupants.

Claim 35 (Previously presented): An intruder detection system for a vehicle, the intruder detection system comprising:

an illuminator for illuminating an interior portion of the vehicle;

a detector for detecting radiation reflected from a person located in the interior portion, the detector being responsive to the detected radiation for providing image signals indicative of an image of the person; and

a processor that is responsive to the image signals from the detector, the processor including face recognition software for analyzing the image signals for facial features of the person, the processor comparing facial features of the person to known facial features of authorized vehicle occupants to determine whether the person is an authorized vehicle occupant, the processor sounding an alarm and recording the image of the person in a memory when the processor determines that the person is not an authorized vehicle occupant.

Claim 36 (Previously presented): The intruder detection system of claim 35 wherein the illuminator is an infrared source and wherein the detector is an infrared detector for receiving reflected infrared radiation.

Claim 37 (Previously presented): The intruder detection system of claim 36 further comprising an infrared filter positioned between the detector and the predetermined field.

Claim 38 (Previously presented): The intruder detection system of claim 36 wherein the infrared source includes a cluster of infrared light emitting diodes.

Claim 39 (Previously presented): The imaging system of claim 35 wherein the illuminator is pulsed on and off, the detector obtaining a first image when the illuminator is on and obtaining a second image when the illuminator is off, the processor determining a difference between the first and second images to mitigate effects of ambient light.

Claims 40-44 (Cancelled)